MAGNUSON SUPERCHARGERS

Installation Instructions for:
Magnum DI Supercharger System
2022-2025 Cadillac CT5-V Blackwing

Step-by-step instructions for installing the best in supercharger systems.

*** PREMIUM GASOLINE FUEL REQUIRED ***

ATTENTION!
Your MAGNUSON SUPERCHARGER kit is sensitive to corrosion!
Use only the vehicle manufacturer recommended coolant for your engine in the intercooler system as well.

89-89-60-060 Rev.A

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INSTALLATION MANUAL

Magnuson Supercharger Magnum DI Kit
GM 6.2 Liter Engine
2022-2025 Cadillac CT5-V Blackwing

Please take a few moments to review this manual thoroughly before you begin work. Make a quick parts check to be certain your kit is complete (see Bill of Material (BOM) parts list inside the accessory box). If you discover shipping damage or shortage, please call our office immediately. Take a look at exactly what you are going to need in terms of tools, time, and experience. Review our limited warranty with care. When unpacking the supercharger kit DO NOT lift the supercharger assembly by the black plastic bypass actuator. This is pre-set from the factory and can be altered if used as a lifting point!

Caution: Relieve the fuel system pressure before servicing fuel system components in order to reduce the risk of fire and personal injury. After relieving the system pressure, a small amount of fuel may be released when servicing the fuel lines or connections. In order to reduce the risk of personal injury, cover the regulator and fuel line fittings with a shop towel before disconnecting. This will catch any fuel that may leak out. Place the towel in an approved container when the job is complete.

Use only premium gasoline fuel, 91 octane or better.

Magnuson Superchargers recommend that you run a minimum of one (1) tank of premium fuel through your vehicle prior to installation of the system to prevent any possible damage that may occur due to running the supercharged engine on lower octane fuel.

Magnuson Superchargers systems are designed for engines and vehicles in “GOOD” mechanical condition. Magnuson Superchargers recommend that a basic engine system “Health Check” be performed prior to the installation of this supercharger system. Be sure to check for any pending or actual OBDII codes and fix/repair any of the stock systems/components causing these codes. If there are codes prior to the installation they will be there after the installation.

Magnuson Superchargers also recommends the following services to be performed on your vehicle before starting and running the vehicle post supercharger system installation:

- Fuel Filter change
- Engine oil and filter change using brand name oil (organic or synthetic) and filter

Note: It is VERY IMPORTANT to use the factory specified oil viscosity. The original equipment manufacturer has selected this grade of oil to work with your other engine systems such as hydraulic chain tensioners and variable cam controls. Deviation from this specification may cause these systems to fail or not function properly. Please refer to your owner’s manual for the recommended oil viscosity for your engine and application.

- On newer vehicles not requiring new spark plugs it is important to verify the spark plug air gap.

On older vehicles Magnuson Superchargers recommend these additional services to be performed:

- New spark plugs with the air gap set at the factory specifications OR new specifications if required by the installation manual.
- Coolant system pressure test and flush. NOTE: YOU MUST USE THE GM SPECIFIED COOLANT MIXTURE.

Non “Magnuson Approved” calibrations or “tuning” will Void ALL warranties and CARB certification.

Tools Required

- **Metric wrench set**
- **1/4” - 3/8” and 1/2” drive metric socket set (standard & deep)**
- **3/8” and 1/2” drive ft-lbs. and in-lbs. torque wrenches**
- **Phillips and flat head screwdrivers**
- **1/2” breaker bar**
- **Serpentine belt wrench**
- **Fuel line quick disconnect tools (included in kit)**
- **Funnel**
- **2 Hose clamp pliers**
- **Safety glasses**
- **Nut driver**
- **Compressed air**
- **Heat gun**
- **Metric Allen socket set 3/8 drive**
- **Metric Allen wrenches**
- **3/8” drive Torx socket set**
- **Plastic pry bar**
- **Oetiker clamp pliers**
- **Band Saw**
- **Metal File**
- **90° Grinder**

Contact Information:

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Important Note: Before installing the Magnuson supercharger kit, please read through the installation procedure and verify that all items are present.

LIMIT OF LIABILITY STATEMENT

The information contained in this publication was accurate and in effect at the time the publication was approved for printing and is subject to change without notice or liability. Magnuson Performance Products reserves the right to revise the information presented herein or to discontinue the production of parts described at any time.

SAFETY PRECAUTIONS

STOP! CAREFULLY READ THE IMPORTANT SAFETY PRECAUTIONS and WARNINGS BEFORE PROCEEDING WITH THE INSTALLATION!

Appropriate disassembly, assembly methods and procedures are essential to ensure the personal safety of the individual performing the kit installation. Improper installation due to the failure to correctly follow these instructions could cause personal injury or death. Read each step of the installation manual carefully before starting the installation.

• Always wear safety glasses for eye protection.

• Place ignition switch in the OFF position.

• Always apply the parking brake when working on a vehicle.

• Block the front and rear tire surface to prevent unexpected vehicle movement.

• If working with a lift, always consult vehicle manual for correct lifting specifications.

• Operate the engine only in well-ventilated areas to avoid exposure to carbon monoxide.

• Do not smoke or use flammable items near or around the fuel system.

• Use chemicals and cleaners in well-ventilated areas.

• Batteries produce explosive gases, which can cause personal injury. Therefore, do not allow flames, sparks or flammable substances to come near the battery.

• Keeps hands and any other objects away from the radiator fan blades.

• Keep yourself and your clothing away from moving parts when the engine is running.

• Do not wear loose clothing or jewelry that can get caught in rotating parts or scratch surface finishes.

• Allow the engine, cooling system, brakes and exhaust to cool before working on a vehicle. WORK SAFELY! Perform this installation on a good clean level surface for maximum safety and with the engine turned off.

Table of Contents

Section 1: **Tuning your Vehicle Computer and Initial Steps**

Any reference to left or right side of vehicle is given from driver's seat perspective.

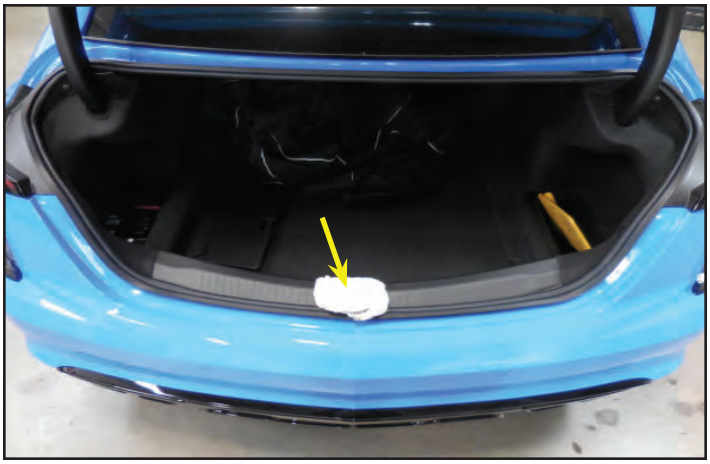
1. Your Intercooler system is sensitive to corrosion. It's very important to use the OEM recommended coolant mixture in your supercharger system as well.

2. Your system requires the use of minimum 91 Octane gasoline fuel. This system is **not** compatible with E85 fuel.

3. Remove the negative cable from the battery with a 10mm wrench. The battery is located in the left rear of the cargo compartment behind a small door.

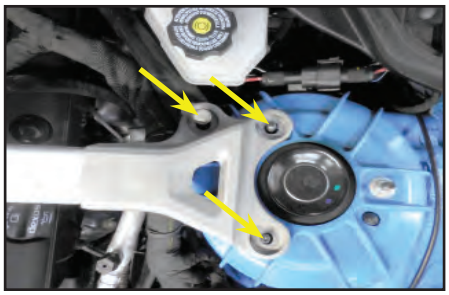
4. Place a rag, or other appropriate insulator over the negative terminal to prevent accidental connection.

5. Place a rag over the rear hatch latch to prevent locking.



Section 2: **Removal of Factory Supercharger and Accessories**

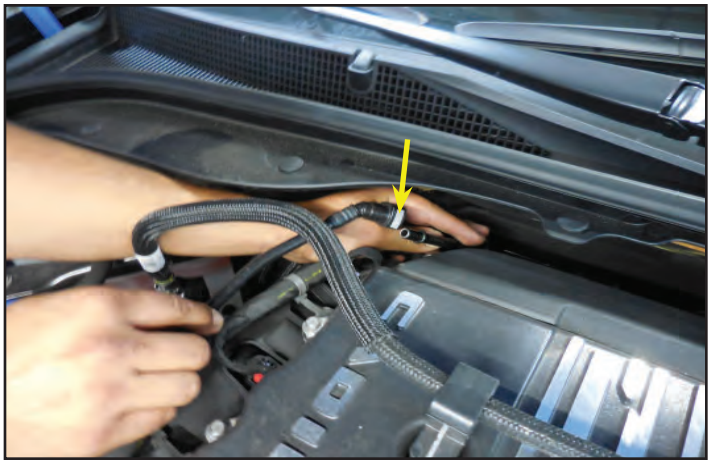
6. Remove the two nuts and 1 bolt (Shown with arrows in the image below) from both sides of the strut tower brace.



7. Remove the strut tower brace. This will be reinstalled later. Place the nuts and bolts back into their original locations temporarily so they don't get lost.

8. Remove the beauty cover from the top of the supercharger.

9. Press the white button (arrow location) on the EVAP fitting at the right rear of the supercharger and disconnect it from the metal hard line.



10. Disconnect the PCV connection on the right valve cover.

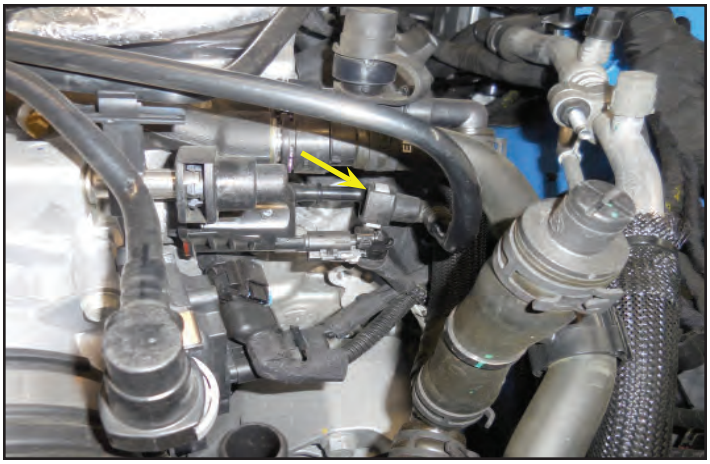
11. Disconnect the PCV hose from the arrow location and remove the hose from the vehicle.

12. Here is the PCV hose that was removed in the last step. This will be reused.

13. Disconnect the two PCV fittings from the arrow locations.

14. Disconnect the PCV fitting from the arrow location.

15. Disconnect the EVAP fitting from the arrow location.



16. Disconnect the PCV fitting from the left valve cover (arrow location).

17. Remove the hose assemblies from the last few steps.

18. Here are the hose assemblies that were just removed from the vehicle.

19. Unlock the red tab for the MAF electrical connection, and disconnect this fitting.

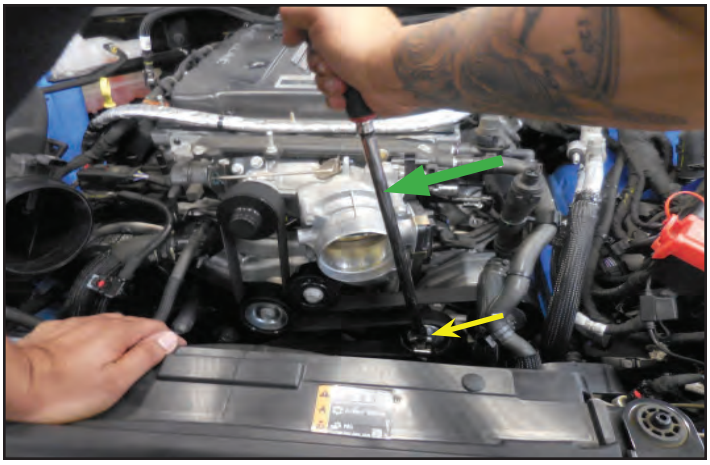
20. Remove the wire harness retainer at the arrow location.

21. Loosen the hose clamp at the arrow location.

22. Loosen the hose clamp at the arrow location.

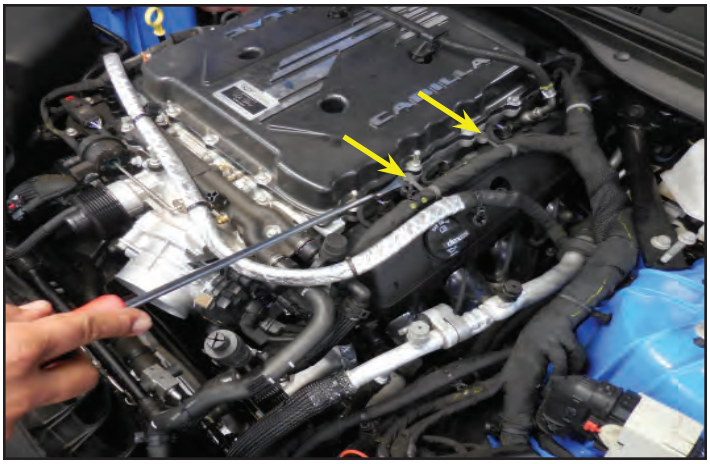
23. Remove the fresh air tube after the hose clamps are loose.

24. Use a long 1/2” drive breaker bar with a 15mm socket to rotate the tensioner (yellow arrow) counterclockwise to take the tension off the serpentine belt and remove the OEM belt. This belt will not be reused.

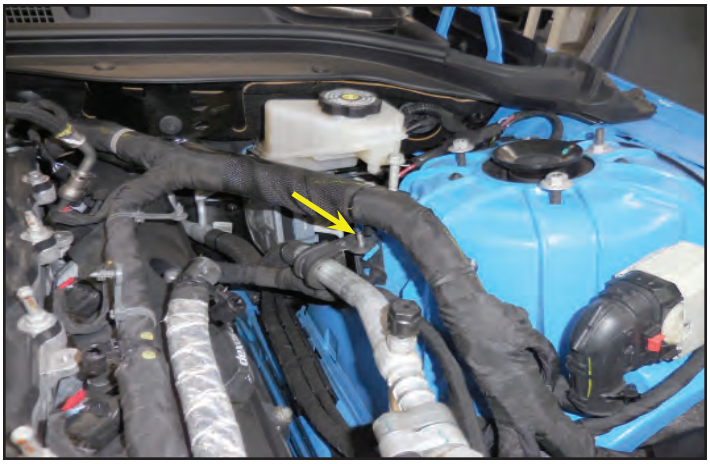


25. Remove the wire harness retainers at the arrow locations.

26. Remove the wire harness retainers at the arrow locations.



27. Remove the wire harness retainer at the arrow location.



28. Remove the wire harness retainer at the arrow location.

29. Remove the wire harness retainers at the arrow locations.

30. Release the red locking tabs on the four coil packs on the right side of the supercharger (arrow locations).

31. Repeat the last step on the four left side coil pack connections. (One shown at the arrow location)

32. Disconnect the eight coil pack electrical connections. (4 locations shown with arrows).

33. Pull the wire harnesses away from the supercharger on both sides.

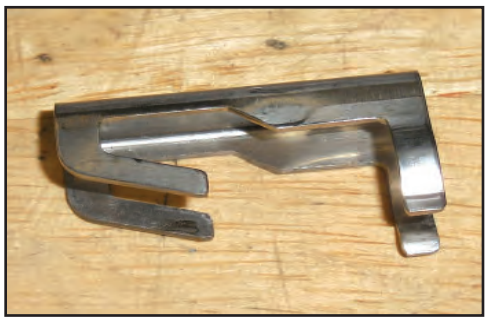
34. Remove the foam noise suppressor from the back of the engine. This will not be reused.

35. Release the red locking tab from the MAP sensor connector and disengage it from the MAP sensor.

36. Remove the wire harness retainer at the arrow location.

37. Pry the safety retainer clip from the fuel line at the arrow location.

38. Slide the safety retainer clip off the bottom of the fuel fitting. The clip is shown below. This clip will not be reused.

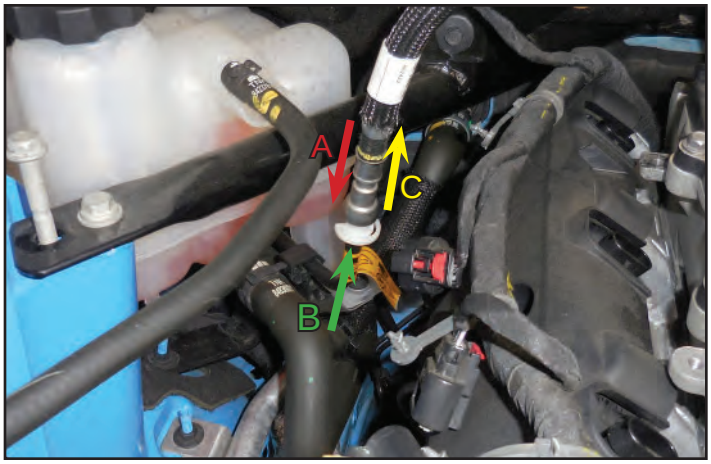


39. Repeat the removal process on the right side safety retainer clip.

40. Pull up on the retainer clips for the fuel line at the top of the supercharger.

41. Place a shop towel below the connection to catch any residual fuel. Be careful while releasing the connection because fuel will spill. Properly dispose of any fuel soaked rags after the fuel line is removed. Have a rubber cap ready to cover the fuel line.

42. Eye protection is necessary.
Place the provided plastic tool over the fuel line at the green arrow location shown.
A. Push the fuel supply line in towards the engine (red arrow).
B. Now push the plastic tool towards the fuel supply line (green arrow).
C. This will disengage the fuel line connection allowing you to pull the supply line off (yellow arrow).



43. Place a rubber cap over the fuel line.

44. Repeat the fuel line removal on the opposite side of the supercharger.

45. Place a rubber cap over the fuel line.

46. Vacuum across the supercharger lid. Remove all debris from the counterbores shown with arrows.

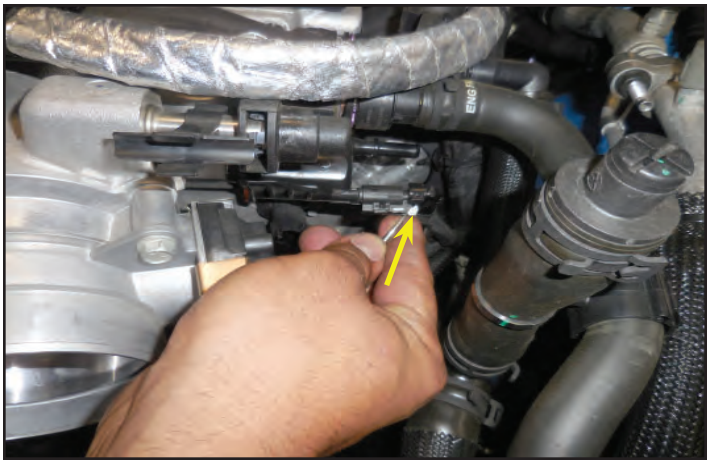
47. Remove all 20 of the supercharger lid bolts.

48. Remove the supercharger lid.

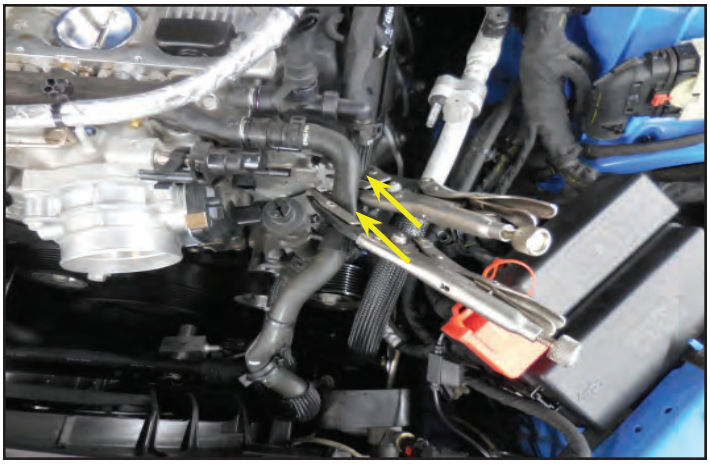
49. Unplug the MAP sensor by first releasing the locking tab, and then pull it loose.

50. Unplug the electronic throttle control connection by first pulling back on the locking tab and then pulling on the connection.

51. Pull out the locking tab for the EVAP solenoid and then unplug the connection.



52. Secure hose clamp pliers at the two intercooler hose locations shown with arrows.



53. Use a pick or other appropriate tool to remove the two clips that secure the connections for the intercooler hoses. You can see this clip in the next step.

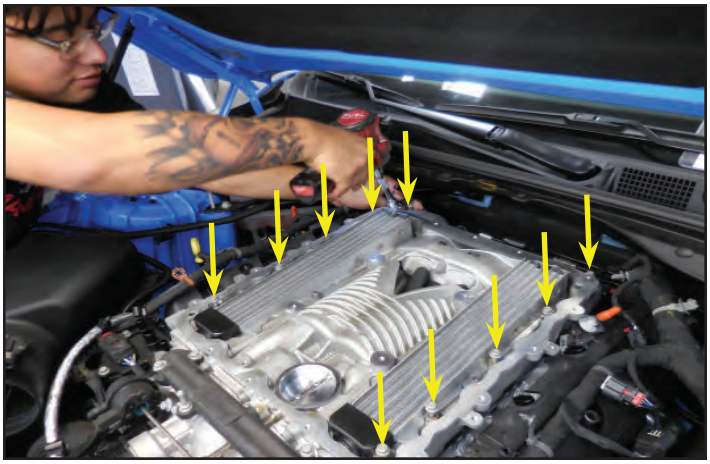
54. Here you can see the clip removed in the photo to the right and below.

55. Have a 3/4” diameter cap ready once you disconnect the intercooler hose.

56. Repeat the removal process for the second intercooler connection. Secure the caps with clamps as shown.

57. Ensure that all the electrical connections are unplugged and that all the harnesses are clear of the supercharger.

58. Remove the 10 bolts securing the factory supercharger shown at the arrow locations.



59. At this point you will need some help to remove the supercharger from the engine. Have at least one other person on the opposite side of the engine bay while you lift it up.

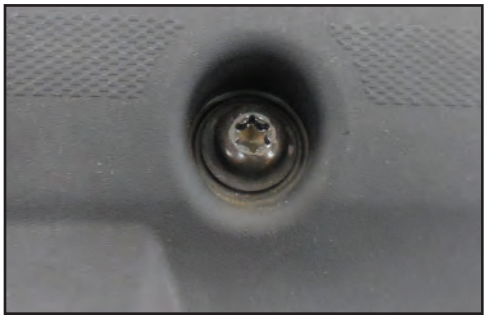
60. Carefully clean up the surface around the intake ports. Use isopropyl alcohol to clean the surface around the ports. Make sure nothing enters the intake ports.

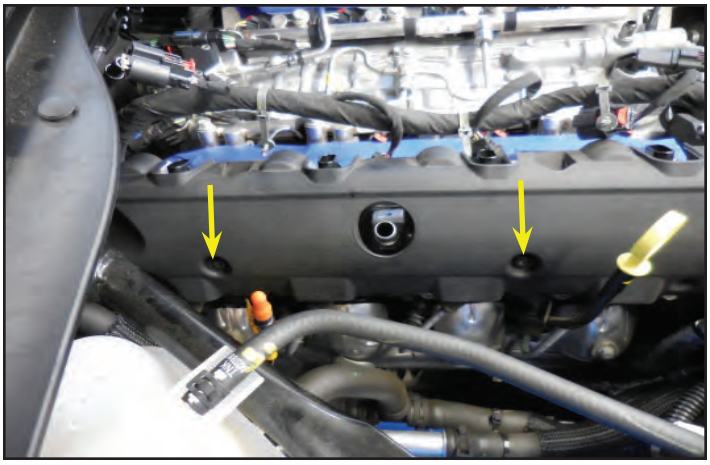
61. Apply blue tape over the ports to prevent anything from entering the engine.

62. Remove the insulation from the manifold valley shown. This will not be reused.

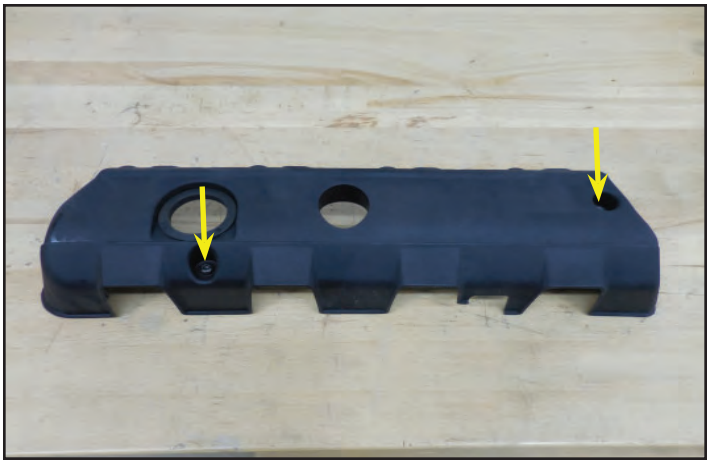
63. Vacuum out the manifold valley to remove any debris.

64. Loosen the T30 Torx fasteners (arrow locations) at the right coil cover and remove the cover. This will not be reused.





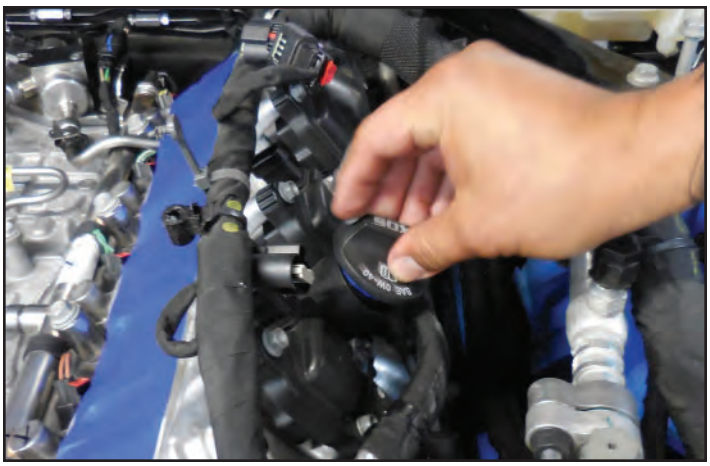
65. Remove the bolts shown at the arrow locations on the left side coil pack cover. (This is shown removed for clarity).



66. Remove the oil fill cap.

67. Remove the left coil pack cover.

68. Reinstall the oil fill cap.

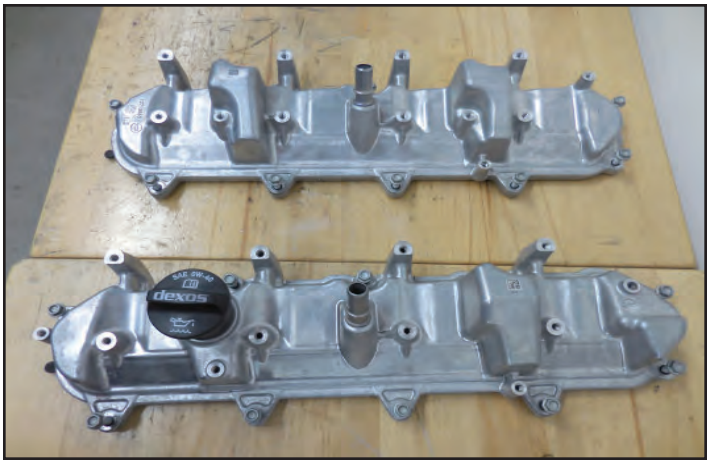


69. Remove the two bolts holding each of the 8 coil packs. You can leave the spark plug wire attached and place the coil packs below the valve cover.

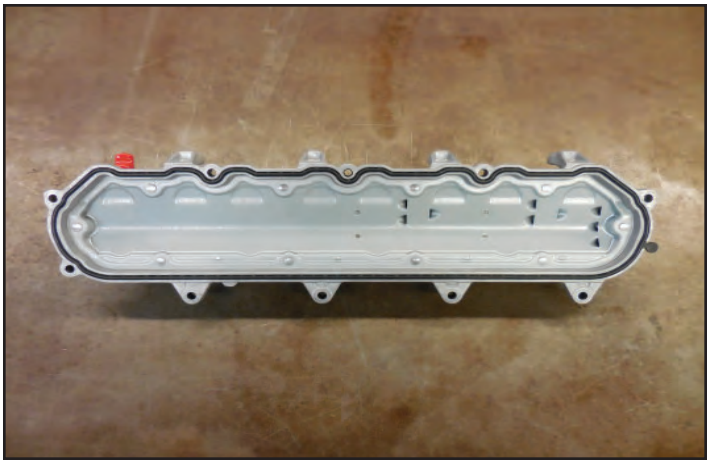
70. Remove all the bolts holding the valve cover in place. You will also need to remove the bolt holding the oil dipstick housing in place at the arrow location.

Section 3: **Valve Cover Modification and Fuel Line Replacement**

71. Here are the two valve covers removed from the engine. You will need to clean them to allow the masking tape to stick.

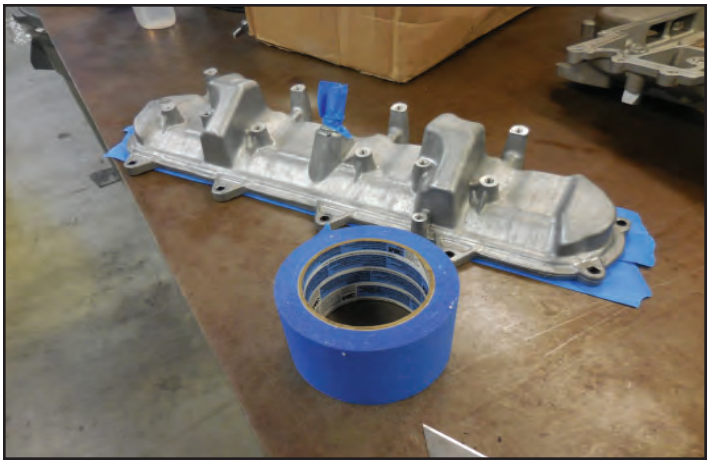


72. Remove the gaskets from the two valve covers.

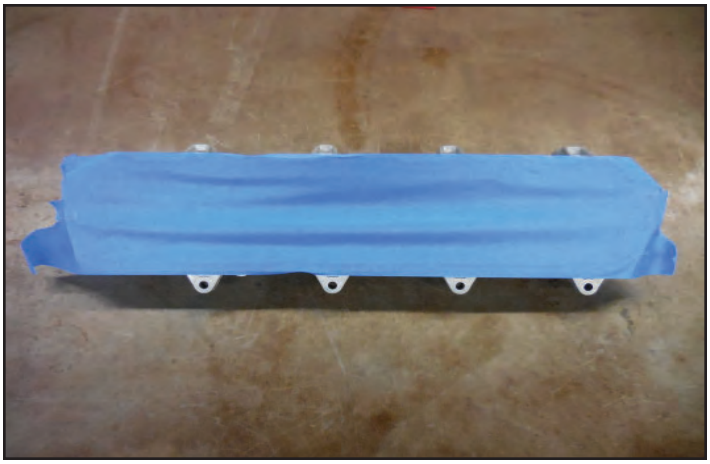


73. There is a tab at the corner that allows you to easily pull this gasket out.

74. Apply masking tape to all the inlets of the valve covers prior to cutting.

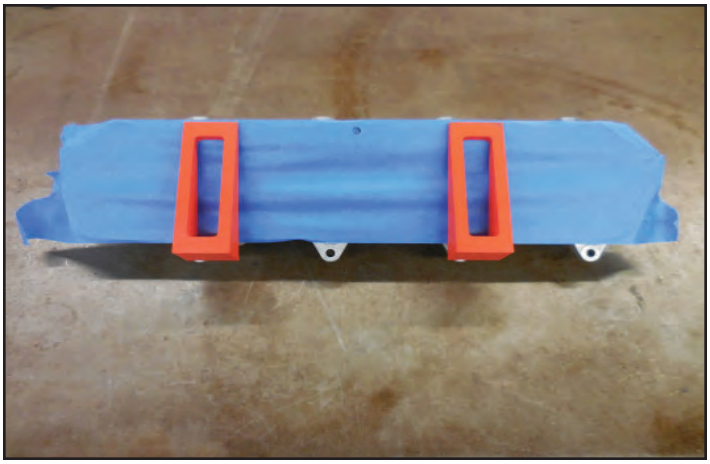


75. Tape the bottom surface as well.

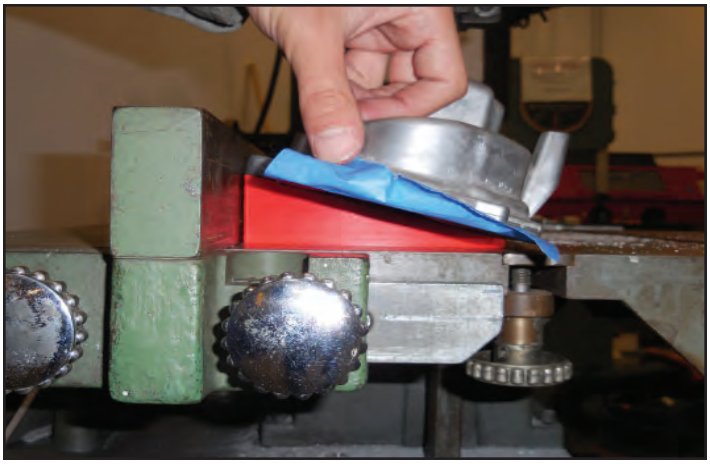


76. Gather the supplied wedges for trimming your valve covers. These could be a different color.

77. Place the wedges on the bottom using the bolt holes to secure them in place.

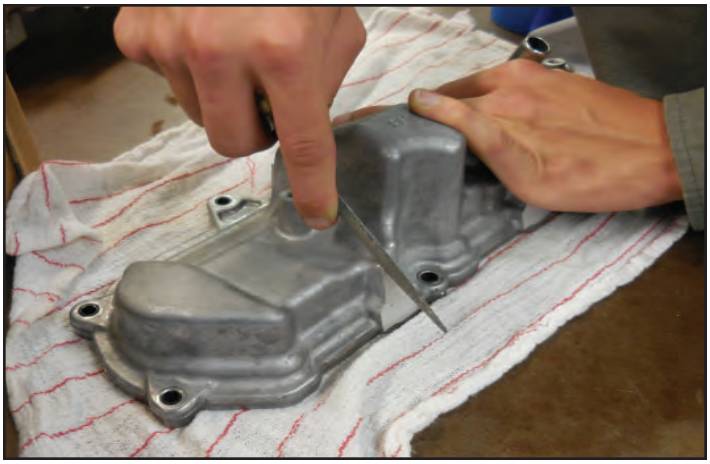


78. Ensure that the wedges sit flat against the bottom of the valve covers, and that they contact the band saw table and guide fence as shown here.



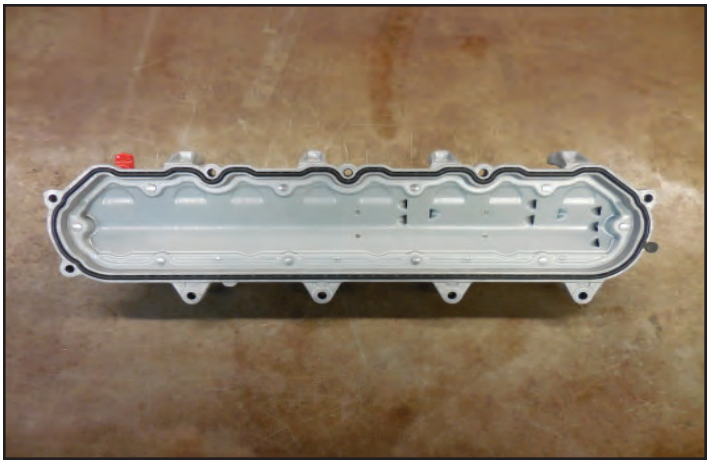
79. Cut each of the top coil pack mounts flush with the valve cover. You will have to stop the saw to reposition the wedges for each cut.

80. Once you have cut the upper coil pack mounts flush you will need to remove any sharp edges. Also thoroughly clean all the debris from the covers once you have removed the sharp edges.



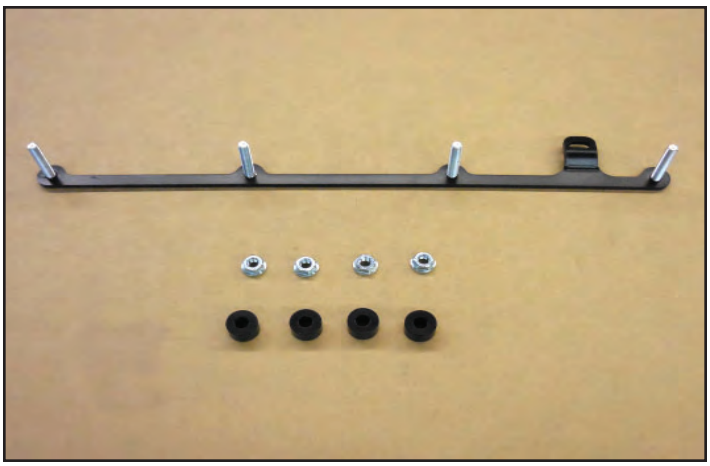
81. Remove the masking tape. Clean out the debris using a solvent cleaning tank. Ensure that the covers are thoroughly clean and dry before installing them on the heads.

82. Re-install the gaskets on both valve covers.

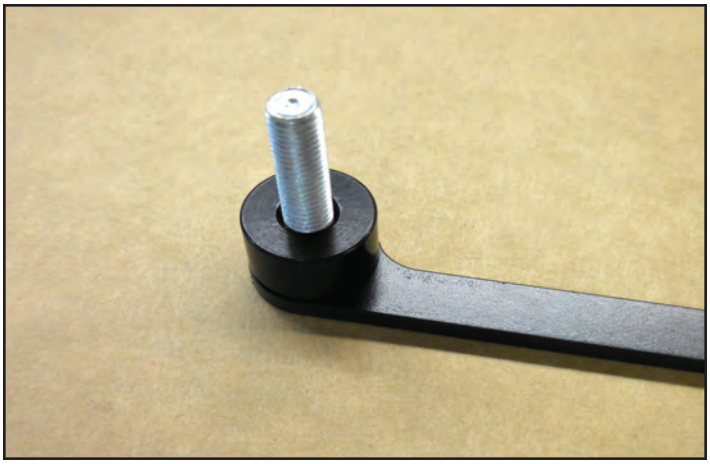


83. Re-install the valve covers on the vehicle and torque to 89 in-lbs. If you are replacing the spark plugs with new ones, we recommend doing it at this time.

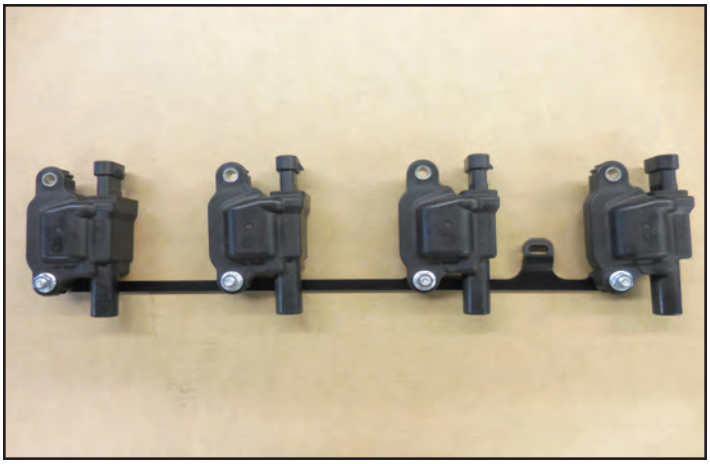
84. Gather the following bracket, nuts and spacers. You will need one set per side.



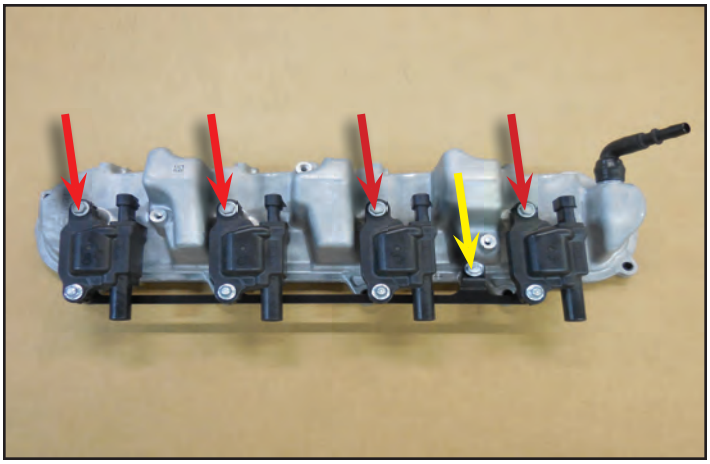
85. Install the spacers on the studs as shown.



86. Install the coil packs with the supplied lower mount as shown using the provided nuts. Leave these nuts loose until after you have attached the assembly to the valve cover.

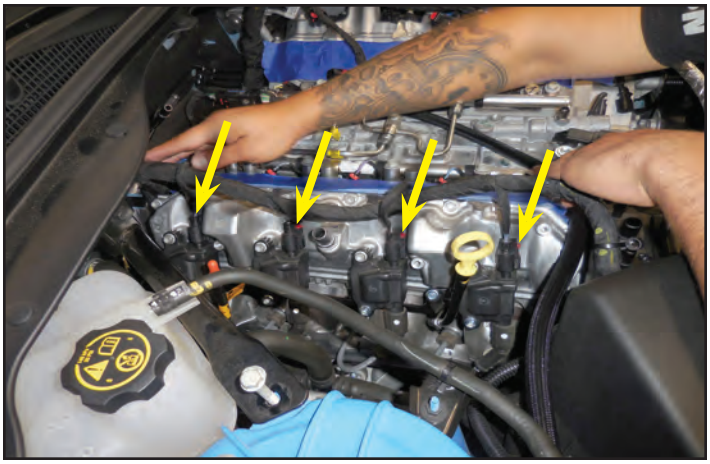


87. Use the OEM bolts at the red arrow locations to install the coils back on the valve covers that were just modified. This will shift the coil packs lower in the engine to give clearance for the supercharger. Install the provided M6x14mm bolt at the yellow arrow location. Torque the 5 bolt locations shown here and the 4 nuts from the last step to 89 in-lbs. Repeat this process on the other valve cover. (Image shown with valve cover off of vehicle for clarity)



88. Trim all the gray wire harness retainers (3 shown with arrows here).

89. Reinstall the electrical connections to the coils and carefully route the wires out of the way as shown here. Ensure that you engage the red locking tabs and make sure the connection is secure. Also make sure all the spark plugs wires are still connected.



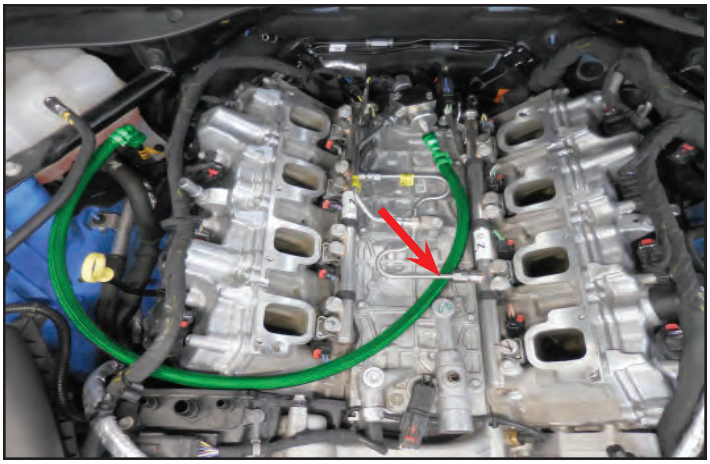
90. Place rags in the manifold valley under the fuel line. Repeat the process of removing the safety clip and disconnect the fuel line using the provided plastic fuel line tool. Remove this fuel line. It will be replaced with a provided fuel line in the next step.

91. Gather the provided fuel line.

92. If your fuel line has the black plastic release insert shown at the red arrow you can leave it on. This can be used to remove the fuel line in the future if needed.

93. Lightly lubricate the outer leading edge of the male fuel connector with the provided Lubriplate grease.

94. Install the provided fuel line by routing it in the location shown highlighted in green. Ensure that you slide the hose under hardline shown with the red arrow. The end connections will be shown in the following steps.

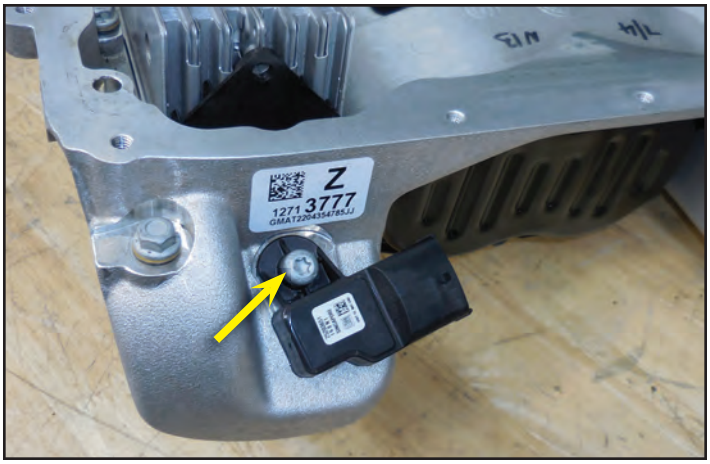


95. Connect the female fuel line connector at the OEM location in the engine valley. Ensure that you hear a click which indicates that the connection is secure. Pull at the connection to verify it is secure.

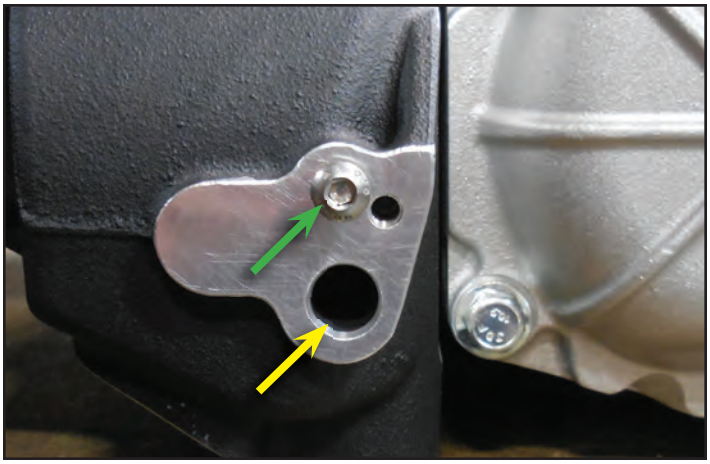
96. Lightly lubricate the outer leading edge of the male fuel connector with the provided Lubriplate grease. Connect the female 90° fuel line connector at the OEM location near the right valve cover. Ensure that you hear a click which indicates that the connection is secure. Pull at the connection to verify it is secure.

Section 4: **Preparing the Supercharger for Installation**

97. Remove the MAP sensor from the back of the OEM supercharger.



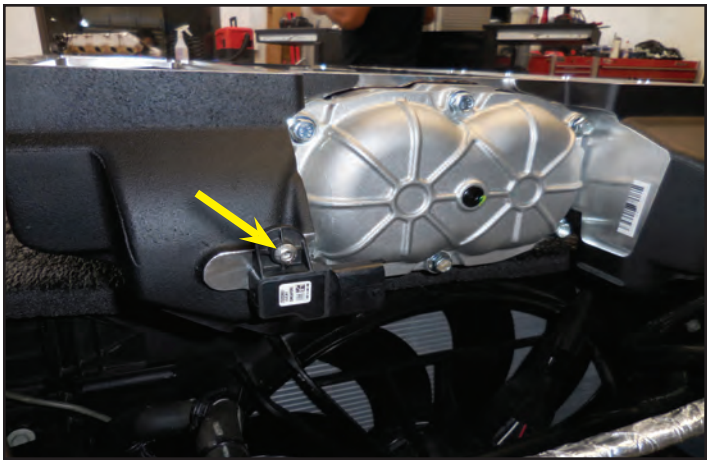
98. Remove the bolt from the green arrow location shown here on the Magnuson supercharger. This is where the MAP sensor from the previous step will be installed. Apply a light coat of supplied Lubriplate grease to the bore shown with a yellow arrow.



99. Apply Loctite 242 to the end of the bolt removed in the last step.

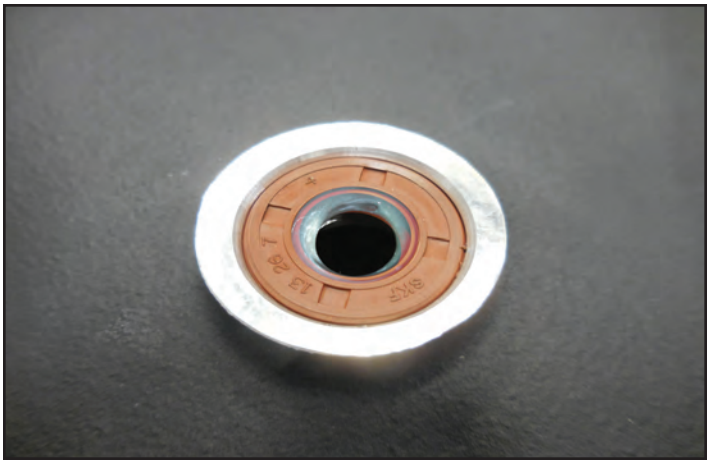
100. Apply a light coat of Lubriplate grease to the O-ring on the MAP sensor.

101. Carefully press the MAP sensor into place. Install the bolt from two steps ago and tighten in place.



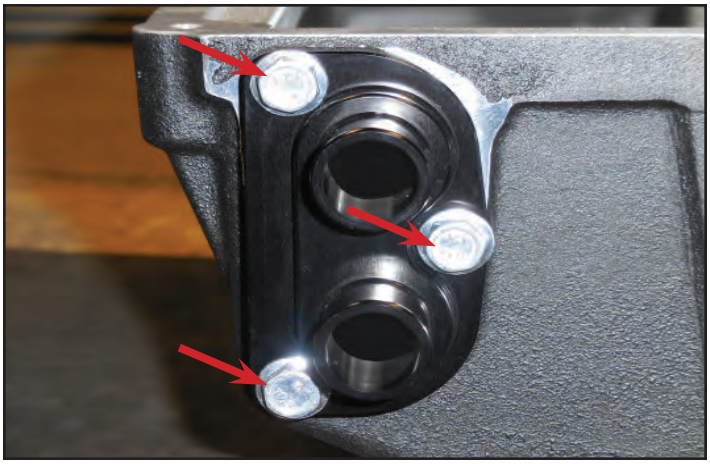
102. Apply some supplied Lubriplate grease to the PCV fitting in the engine valley at the arrow location.

103. Apply some supplied Lubriplate grease to the PCV seal at the bottom of the Magnuson supercharger.

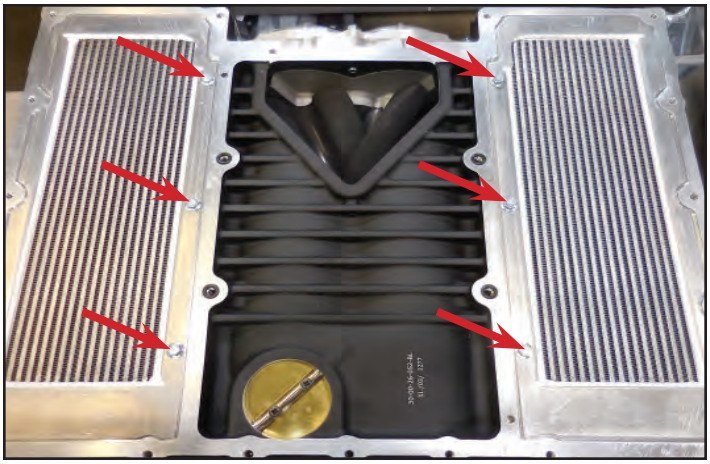


104. Remove the 19 M6x20mm bolts around the perimeter of the lid using an 8mm socket wrench and remove the lid. Also remove the four screws holding the Magnuson Supercharger emblems to gain access to the 4 bolt locations that will be fitted with M6x30mm bolts later.

105. Remove the 3 bolts holding the coolant manifold assembly at the front of the supercharger and pull the spigot out. Repeat this process on the other coolant manifold assembly.

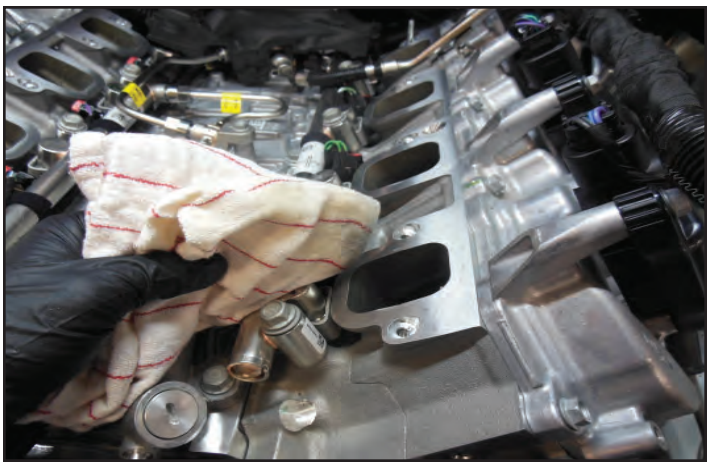


106. Remove the 6 bolts holding the charge air coolers inside the supercharger housing and pull the charge air coolers out. Carefully pull out the charge air coolers by hand. Pull evenly around the perimeter to disengage the seal.



107. Remove the blue tape from the intake ports.

108. Wipe down the intake port outer sealing surfaces with a rag coated with brake cleaner to remove any tape adhesive.

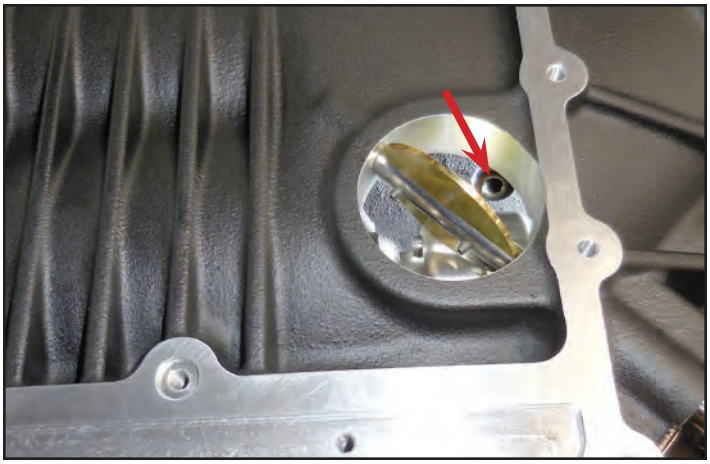


109. Apply a light coat of the supplied Lubriplate grease to the intake port outer surfaces. Pull the coil harnesses to the sides to make clearance for supercharger installation. Ensure that there are no tools or other items left in the valley area before you install the supercharger.

110. Ensure that all 8 intake gaskets are correctly installed in the supercharger (8 shown here).

111. Have someone help you support the supercharger from the opposite side while installing. Carefully place the supercharger on the inlets for the heads.

112. Open the bypass and align the PCV fitting with the rubber seal as shown at the red arrow.

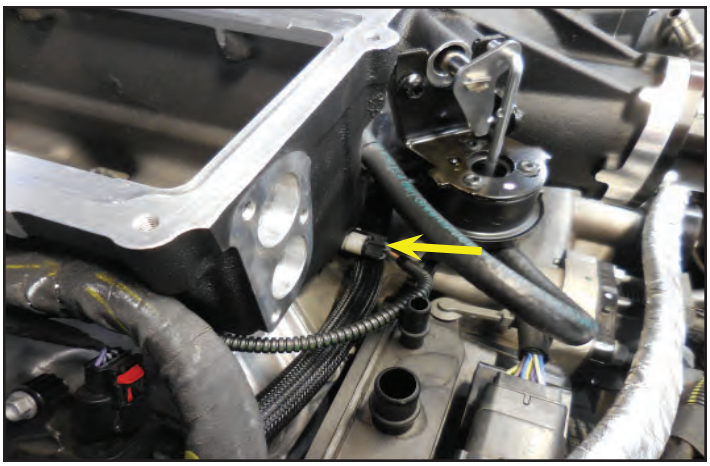


113. Gather the MAP/IAT breakout harness.

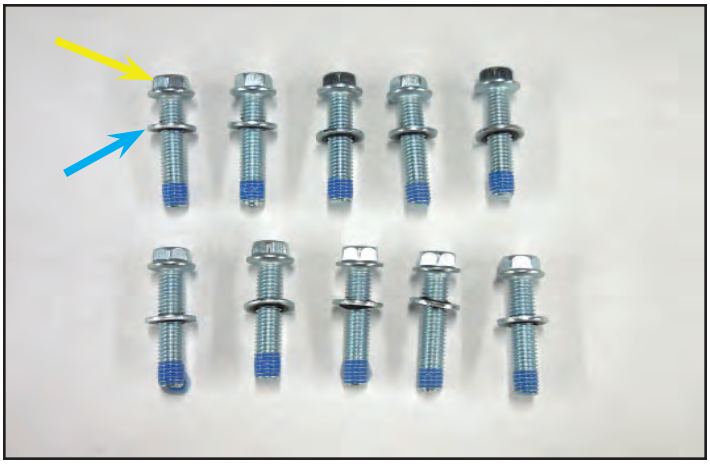
114. Plug in the MAP/IAT breakout wire assembly into the rear MAP sensor shown here at the arrow location and engage the locking tab.

115. Plug in the other end of the MAP/IAT breakout wire assembly to the wire that led to the OEM rear MAP sensor and engage the locking tab.

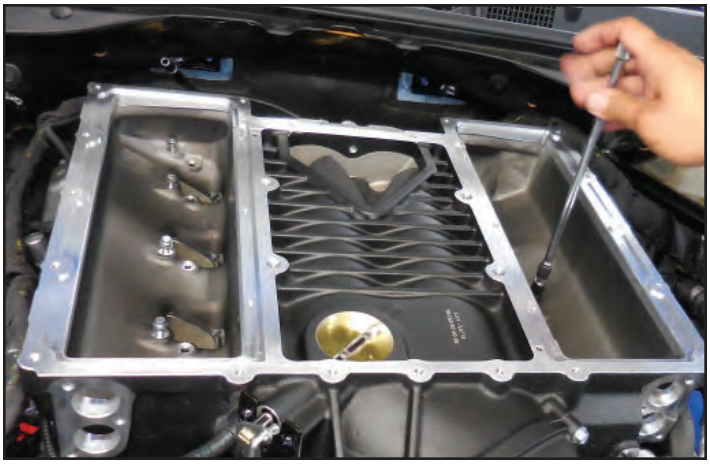
116. Route the IAT connector from the breakout harness around the right side of the supercharger and connect it to the IAT sensor (arrow location).



117. Install the provided seal washers shown with a blue arrow on 10 provided M6x35mm flange bolts. Once you have slid the washers on all the way to the heads apply a light coat of Lubriplate grease to their undersides. Finally apply blue Loctite 242 to the ends of these bolts as shown.



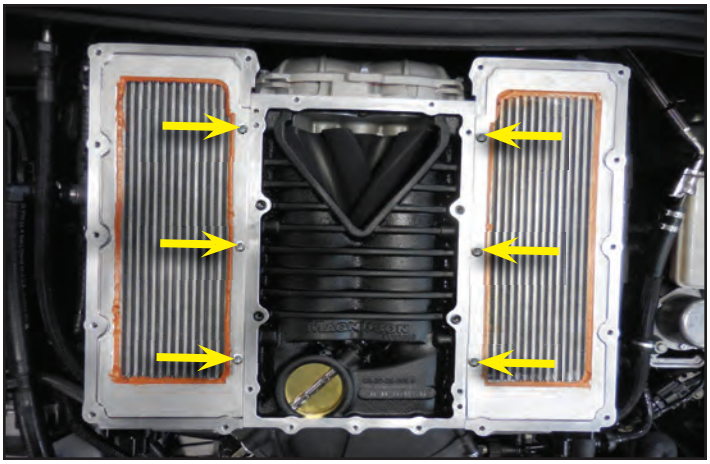
118. Ensure that the supercharger is sitting flush with the intake ports prior to installing the bolts. Install the bolts from the last step into the locations listed on the diagram at the back of this manual. First finger tighten all bolts.



119. Gradually work your way up to the torque specification listed while you follow the numerical order listed in the diagram. Make 3 passes, slightly increasing torque each time. Then make a final pass at 106 in-lbs following the torque sequence at the back of this book. Ensure that the supercharger pulley still spins freely after full torque is applied.

120. Locate the six M5x35mm flange head bolts that held the charge air coolers in place. Apply the provided Loctite 242 on the ends of each bolt.

121. Reinstall the charge air coolers (2 each). Ensure that the port holes match with holes in the housing. Secure with the six M5x35mm flange head bolts from the last step in the locations where they were originally (yellow arrows).

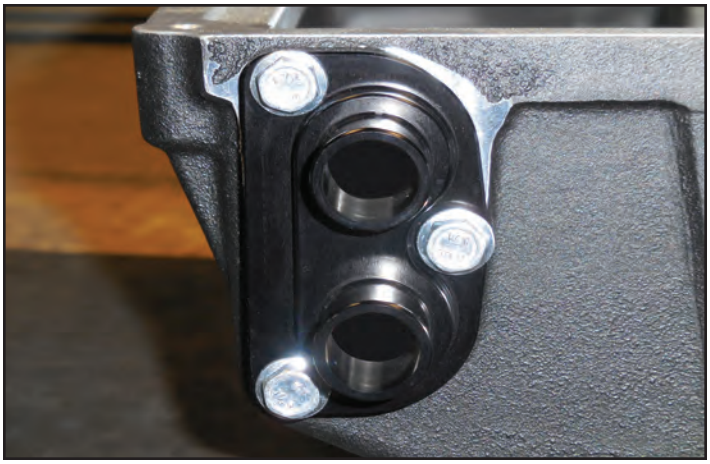


122. Torque the 6 intercooler M5x35mm bolts from the last step to 70 in-lbs.

123. Gather the coolant manifolds shown that were removed earlier. Relube all the O-rings with the provided Lubriplate grease prior to reinstalling the coolant manifolds.

124. Apply Loctite 242 to the six M6x20mm flange head coolant manifold bolts that were removed earlier.

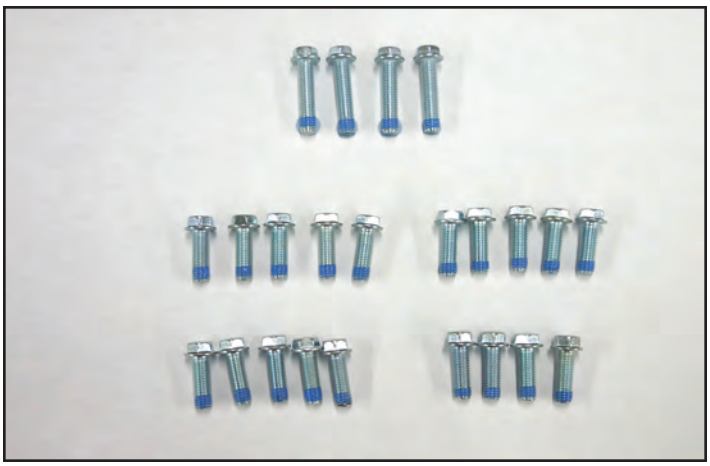
125. Carefully install the coolant manifolds, taking care not to damage the O-rings, with the six M6x20mm flange head bolts from the last step.



126. Torque the six M6x20mm bolts on the two coolant manifolds in the last step to 106 in-lbs.

127. Install the 4 provided small O-rings at the red arrow locations.

128. Apply Loctite 242 to the 19 M6x20mm bolts that were removed from the lid and 4 more M6x30mm bolts that were provided and re-install the lid. The four M6x30mm bolts are for the center locations on the lid.



129. Carefully place the lid over the 4 O-rings making sure not to move them. Install the bolts from the last step hand tight.

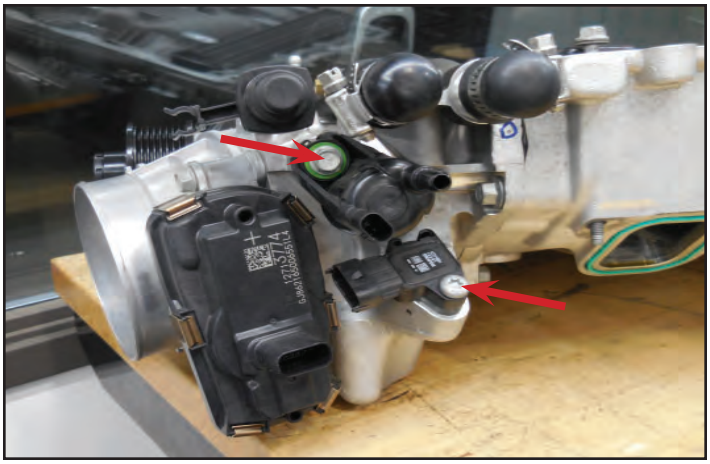
130. Zero torque the fasteners first before applying the final torque. Torque these 23 bolts to 106 in-lbs following the order for the lid given at the back of this manual.

131. Gather the provided Magnuson Supercharged badges and M4x8mm bolts.

132. Application of the adhesive backing from the two provided Magnuson Supercharged badges is optional. Be aware that these badges will be difficult to remove once the adhesive has been applied.

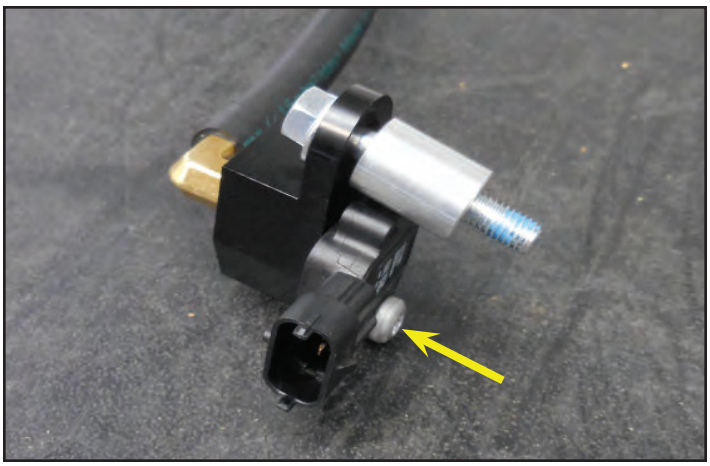
133. Install the badges using the provided bolts.

134. Remove the two bolts holding the EVAP solenoid and the MAP sensor to the OEM supercharger. These parts will be used in future steps.

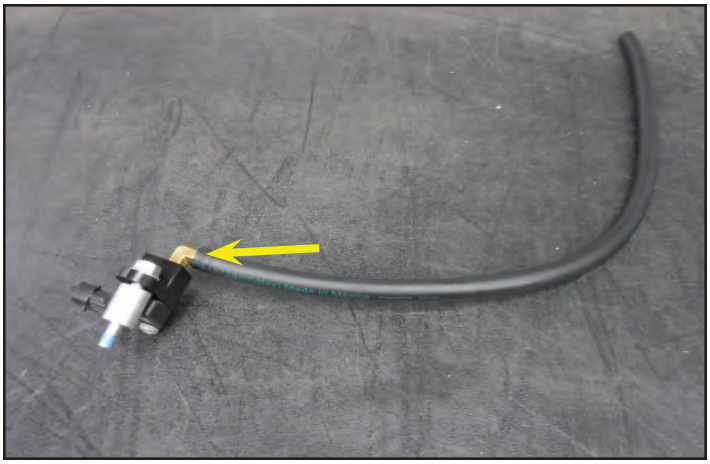


135. Apply a light coat of Lubriplate grease to the MAP sensor O-ring.

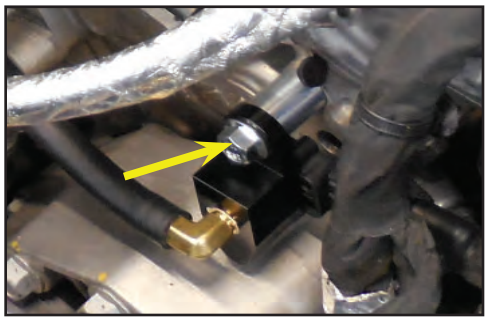
136. Gather the supplied front MAP sensor bracket assembly. Install the MAP sensor into the bracket and secure it with the OEM bolt in the location shown with an arrow with Loctite 242. Install the supplied M8x45mm bolt and spacer shown to the bracket at the location shown.

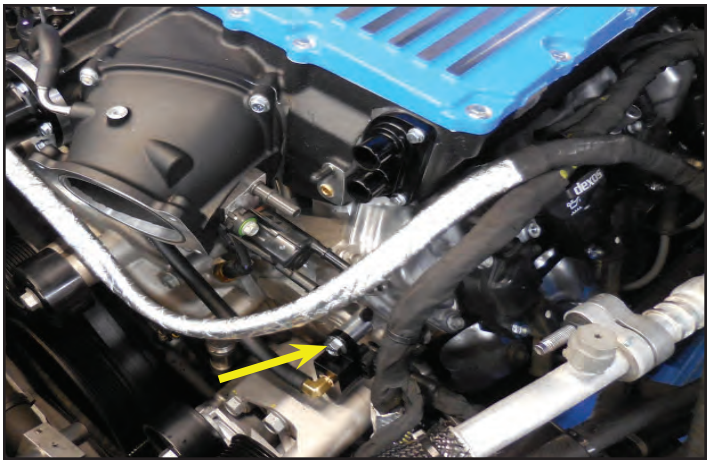


137. Gather the 5/16”x 20”Long hose and insert it over the brass barb (arrow location) on the MAP sensor bracket assembly.



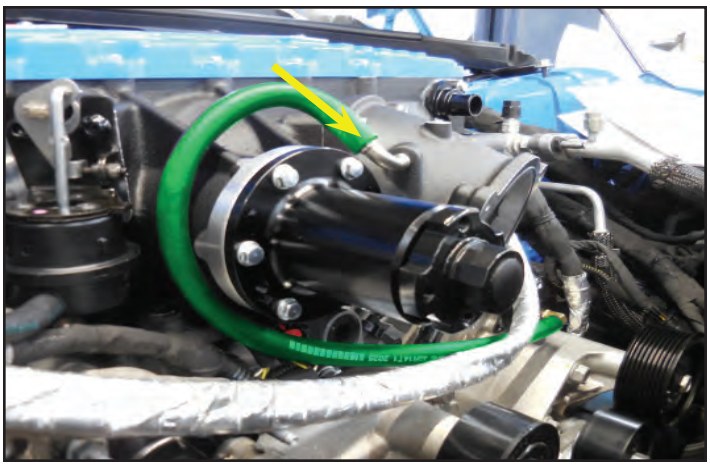
138. Thread the M8x45mm bolt with the spacer from the last step into the hole just below the left valve cover at the arrow location.





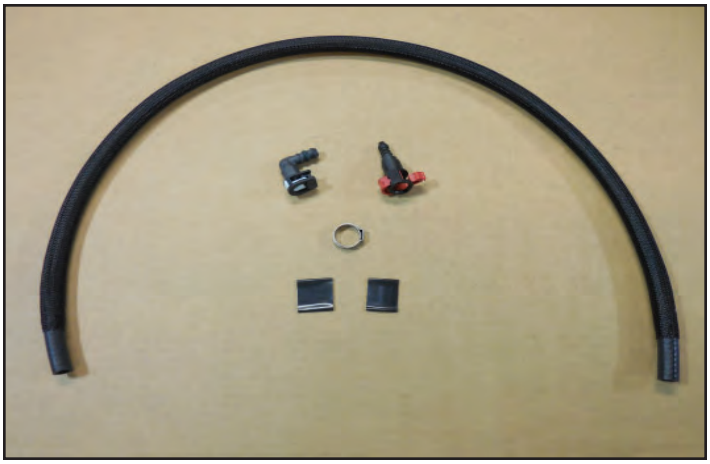
139. Plug the electrical connection back into the MAP sensor at the arrow location and engage the locking tab.

140. Route the other end of the 20” hose in the direction shown highlighted in green here and attach it to the 90° hose barb at the right side of the inlet manifold.



141. Install the EVAP solenoid at the red arrow location with the OEM bolt and torque it to 89 in-lbs. Plug the electrical connection onto the EVAP solenoid at the yellow arrow and engage the locking tab.

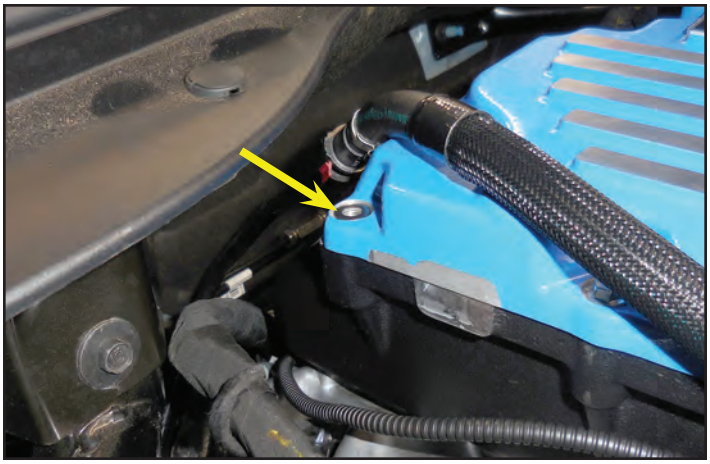
142. Gather the following provided 38” hose with mesh over it, shrink tube, 17mm Oetiker clamp, and fittings. Follow the instructions in the next step for assembly of this EVAP hose.



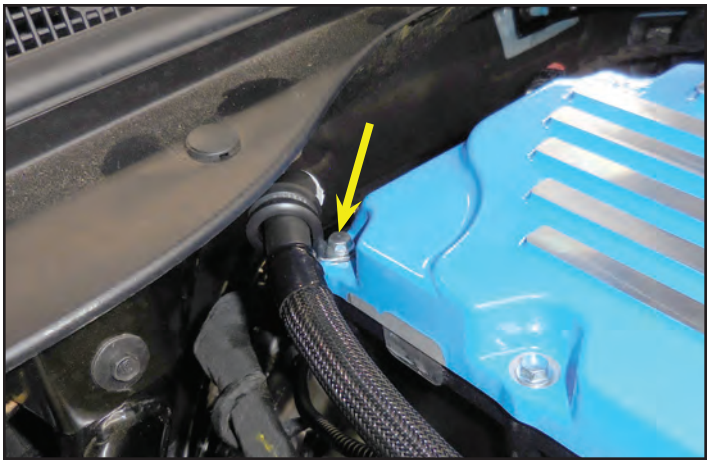
143. Ensure that the 90° fitting has the white release button. After this you will slide the heat shrink tubing half way over each end of the mesh and the other half over the hose to protect the mesh from fraying. Use a heat gun to shrink the tubing over the ends of the mesh. Slide the 17mm Oetiker clamp over the side where you will put the straight connector. Press the barbed ends of the straight and 90° fitting into the ends of the hose until they bottom out. You may need to heat the hose a little to get the 90° fitting on. Use Oetiker clamp pliers to secure the clamp.

144. Connect the straight fitting from the last step to the hardline at the back of the supercharger. Secure the end by closing the red plastic clamp. Pull on the connection to ensure that it is secure.

145. Remove the right rear corner supercharger lid bolt and place the provided M6 washer at the hole.

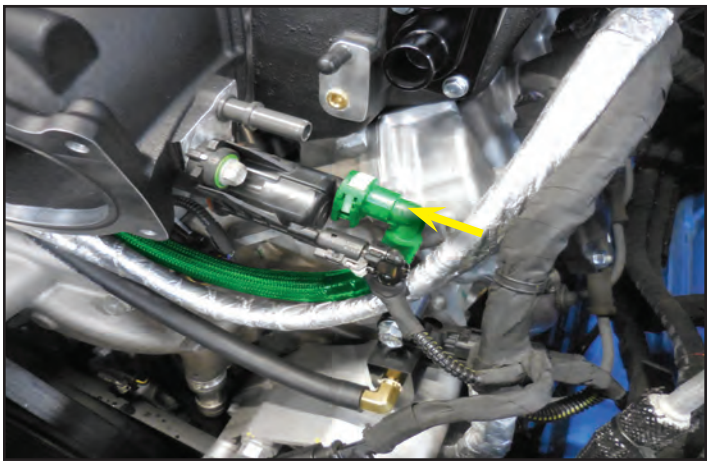


146. Apply Loctite 242 to the M6x20mm bolt that was removed in the last step. Install a provided Adel clamp at the corner lid location and secure with the M6x20mm bolt.

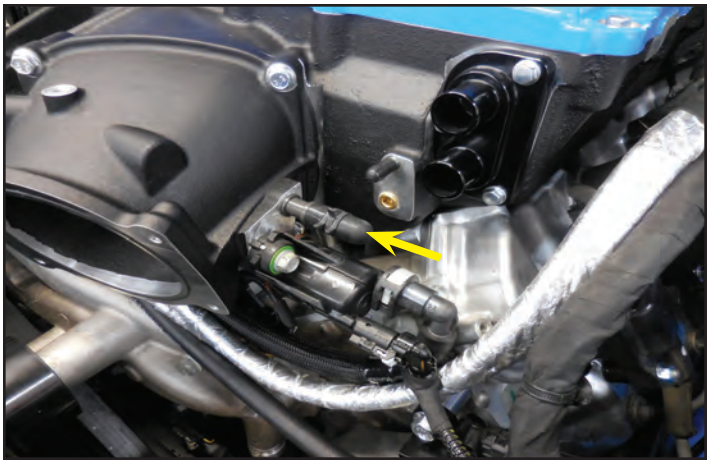


147. Torque the M6x20mm bolt from the last step to 106 in-lbs.

148. Continue routing the EVAP hose from the last step around the right side of the supercharger and under the inlet manifold and connect it to the EVAP solenoid as shown here highlighted in green.

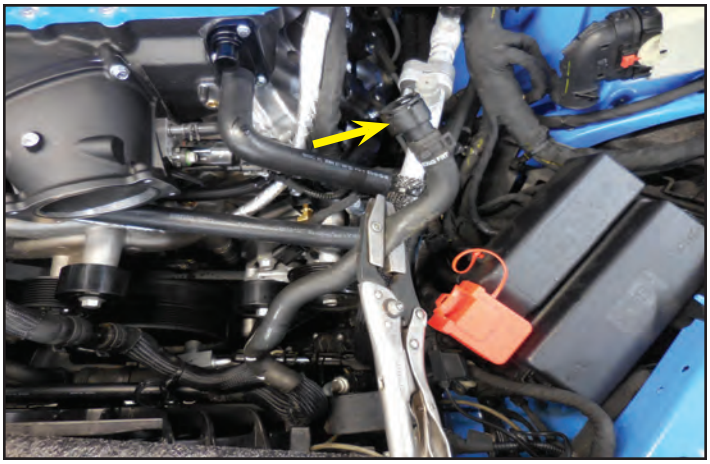


149. Gather the provided 3/8” cap and 1/2” spring clamp shown below. Install these items on the quick connect fitting at the arrow location.

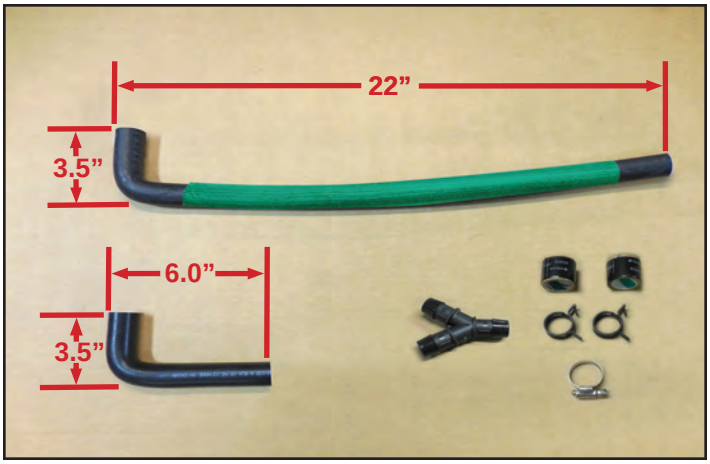


Section 5: **Coolant Line and Air Duct Installation**

150. Remove the spring clamp holding the OEM quick connect fitting to the end of the OEM intercooler hose shown and remove the fitting. The clamp and fitting will not be reused. Also remove the OEM quick connect fitting from the other intercooler hose that was disconnected earlier.



151. Cut the 4”x36” 90° hose to 3.5”x22” measuring from the outside edges of the hose as shown in the photo. Slide the provided 19” mesh onto the 22” length highlighted here in green. Cut the 4”x18” 90° hose to 3.5”x6.0” again measuring from the outside edge. Also gather the “Y” connector, shrink clamps, spring clamps, and worm gear clamp shown. These will be connected to the charge air cooler ports in the next step. Save the hose that was cut from the 4”x36” hose for connecting to the reservoir later.



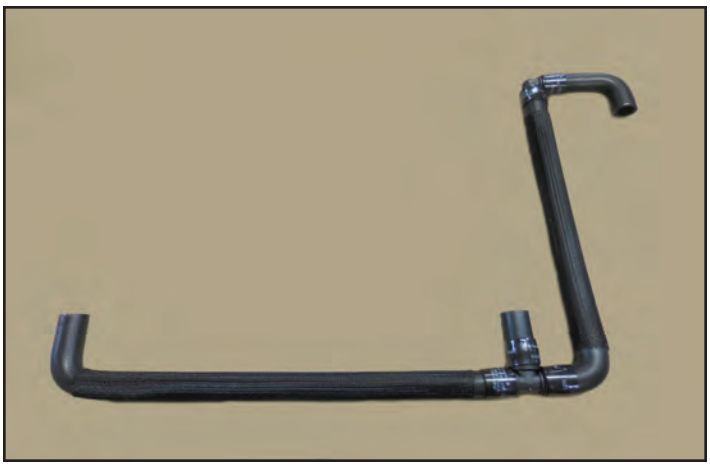
152. Route the hoses from the last step following the green highlighted areas shown here. Use the “Y” connector to join them at the yellow arrow location, and secure them with the two provided shrink clamps from the previous step as directed in the next step.

153. After you have positioned the hoses properly as shown in the last step you can temporarily remove the two hoses from the supercharger to allow access all around the shrink clamps with the heat gun. Move the heat gun around the connector to ensure even heating as you ensure that the clamps remain at the end of the hoses. Be careful not to melt anything around this connection. Ensure that the connections are tight by pulling on them once the you have shrunk the clamps.

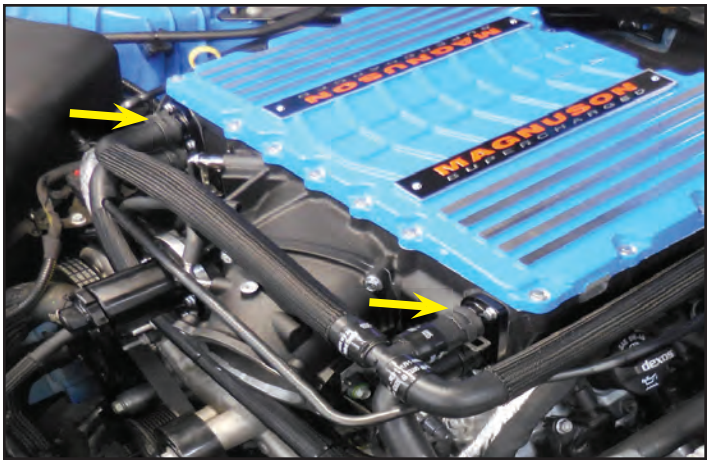
154. Once you have shrunk the two clamps in place as shown here you will attach the OEM intercooler radiator hose from 4 steps ago to the other end of the “Y” connector and secure it with a provided worm gear clamp (arrow location).

155. Reinstall the hose ends onto the supercharger and secure them with the provided spring clamps at the yellow arrow locations. Lightly secure the hose in place with two provided cable ties (highlighted in green) at the green arrow locations. These cable ties should be loose to prevent hose restriction.

156. Gather the provided upper charge air cooler hose assembly.



157. Install the upper charge air cooler hose assembly to the upper coolant manifold spigots at the yellow arrow locations with two provided spring clamps.



158. Gather the provided reservoir and install it to the provided bracket using the 3 bolts that came attached to the reservoir.

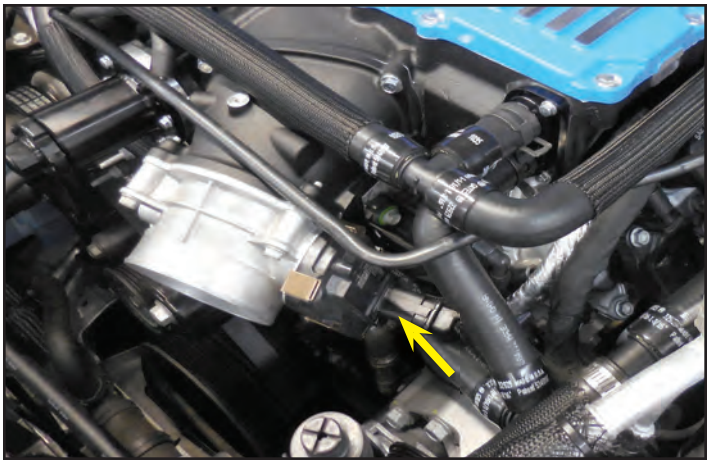
159. Remove the bolt shown at the green arrow location and use this location to install the reservoir bracket from the last step. Torque the bolt to 20 ft-lbs. Install the opposite end of the hose assembly from two steps ago at the back of the reservoir (shown with a yellow arrow) and use a provided worm gear clamp to secure the location.

160. Cut a 9” hose section from the material that was left over after cutting the 4”x36” 90° hose. This will be used to connect the reservoir output to the OEM intercooler pump inlet along with the 3/4” hose mender, shrink clamp, and two worm gear clamps. These items will be used in the next step. Connect one end of the 9” hose to the 3/4” hose mender and secure with the shrink clamp. Again make sure the connection is tight after heating the clamp by pulling on it.

161. Connect the 9” hose that was connected to the hose mender to the output of the reservoir using a worm gear clamp at the yellow arrow location. Connect the hose mender side to the input hose for the intercooler pump at the green arrow location and secure with a worm gear clamp.

162. Apply Loctite 242 to the 4 OEM throttle body bolts and use them to install the throttle body to the supercharger. Torque the throttle body bolts to 106 in-lbs.

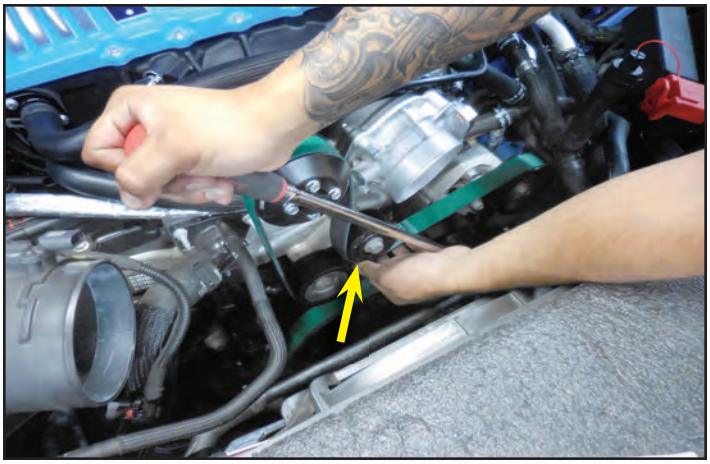
163. Plug in the electronic throttle control and ensure that the locking tab is engaged.



164. Gather the supercharger pulley and the four provided M6x16mm bolts. Apply Loctite 242 to the 4 bolts as shown.

165. Lightly install the pulley onto the supercharger hub with the four bolts from the last step. Route the supplied supercharger belt (shown in green) according to the diagram at the back of this manual.

166. Use a long 1/2” drive breaker bar with a 15mm socket to rotate the tensioner counter-clockwise to provide slack in the belt. It is easiest to install the last portion of the belt at the smooth idler shown with the yellow arrow.

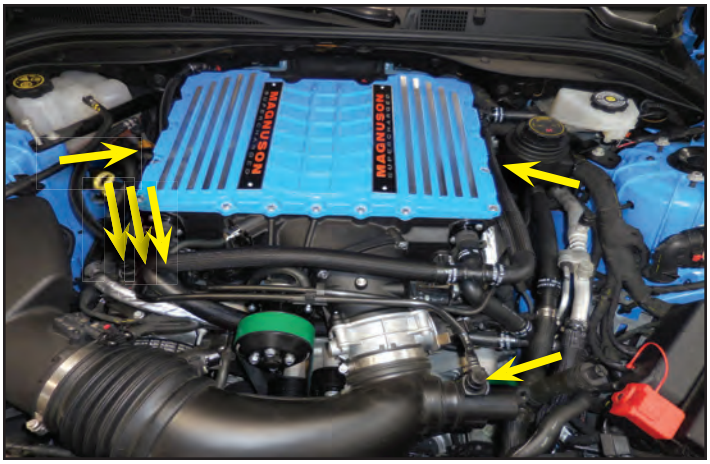


167. Torque the 4 M6x16mm pulley bolts to 106 in-lbs.

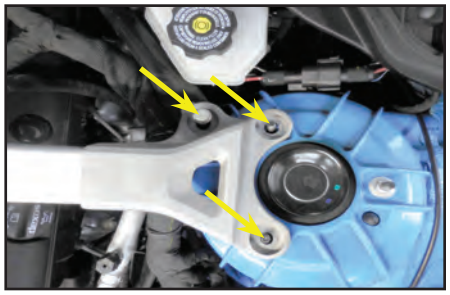
168. Inspect the engine air filter to ensure it is clean. Reinstall the OEM fresh air tube between the airbox and the throttle body. Secure the air tube with the OEM worm gear clamps.

169. Plug in the MAF connector at the airbox lid and engage the locking tab.

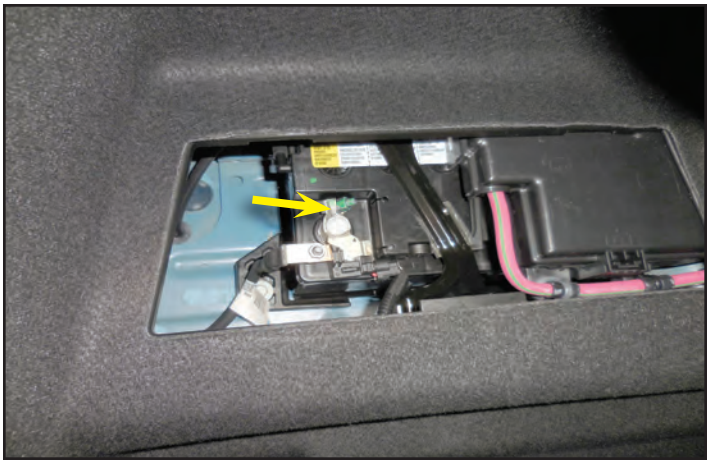
170. Reconnect the 3 factory PCV lines back to their original locations shown with arrows here. Ensure that all connections are securely locked.



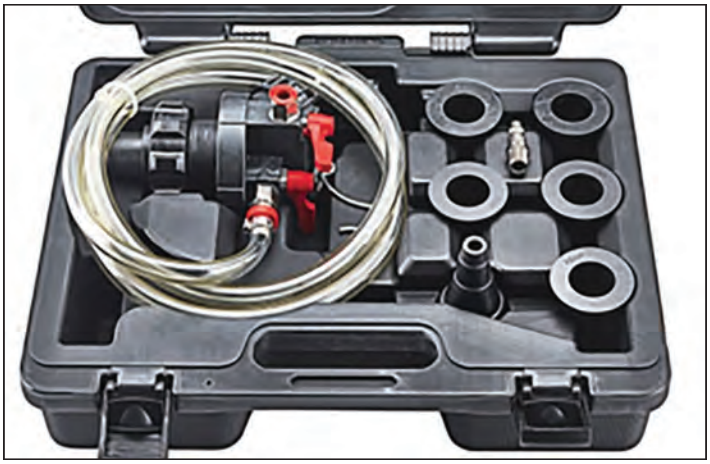
171. Reinstall the strut tower brace with the 4 nuts and 2 bolts. Torque these 6 locations to 20 ft-lbs.



172. Connect the negative terminal of the battery and tighten the nut with a 10 mm wrench.



Section 6: **Coolant Fill and Final Testing**



WARNING: You must perform a vacuum leak down test on your intercooler system prior to adding any coolant. This can be accomplished with the same equipment that is used for engine cooling systems.

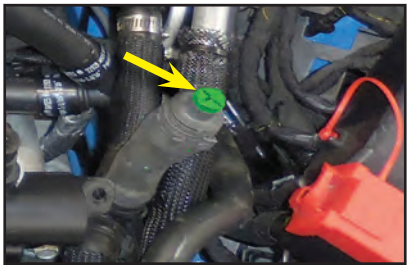
173. Use the GM approved engine coolant mixture to fill your intercooler reservoir to capacity.

174. Place rags around the intercooler reservoir. You can temporarily leave the cap off the reservoir to monitor coolant level. Clear tools and other items from engine area.

175. Have an assistant start the engine and let it idle for a few seconds to get the intercooler pump to start. When the engine first starts check for belt alignment.

176. Before the reservoir drains completely have your assistant turn the engine off. Do not let the reservoir run dry. Fill the reservoir some more and have your assistant cycle the engine again until you see the coolant level remain constant. While the pump is running check for circulation in the reservoir, and coolant leaks. Fill the reservoir to the base of the neck of the housing once all the air has been removed and install the cap. (Note: You may have to cycle the engine on and off a couple times to get the pump to work).

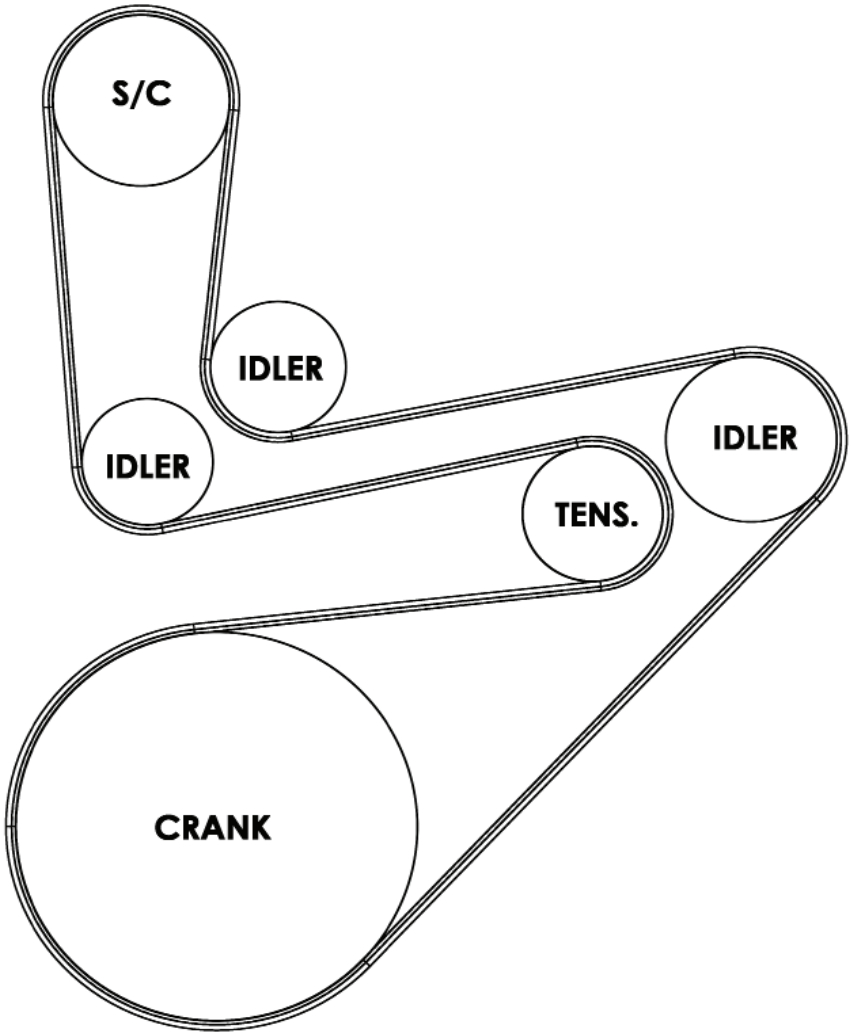
177. Slightly unscrew the blead cap (highlighted in green) at the arrow location to remove air from the hose extension. A small amount of fluid should come out. Check the reservoir level and fill as necessary.



178. The supercharger is shown fully installed. Start the engine and check for coolant, and fuel leaks. Test drive the vehicle for the first few miles under normal driving conditions. Do not attempt any wide open throttle runs. Check for any unusual sounds, vibrations, or engine misfires. The supercharger does have a slight whining noise under boost conditions, which is normal. After the initial test let the engine cool down, and recheck coolant levels.

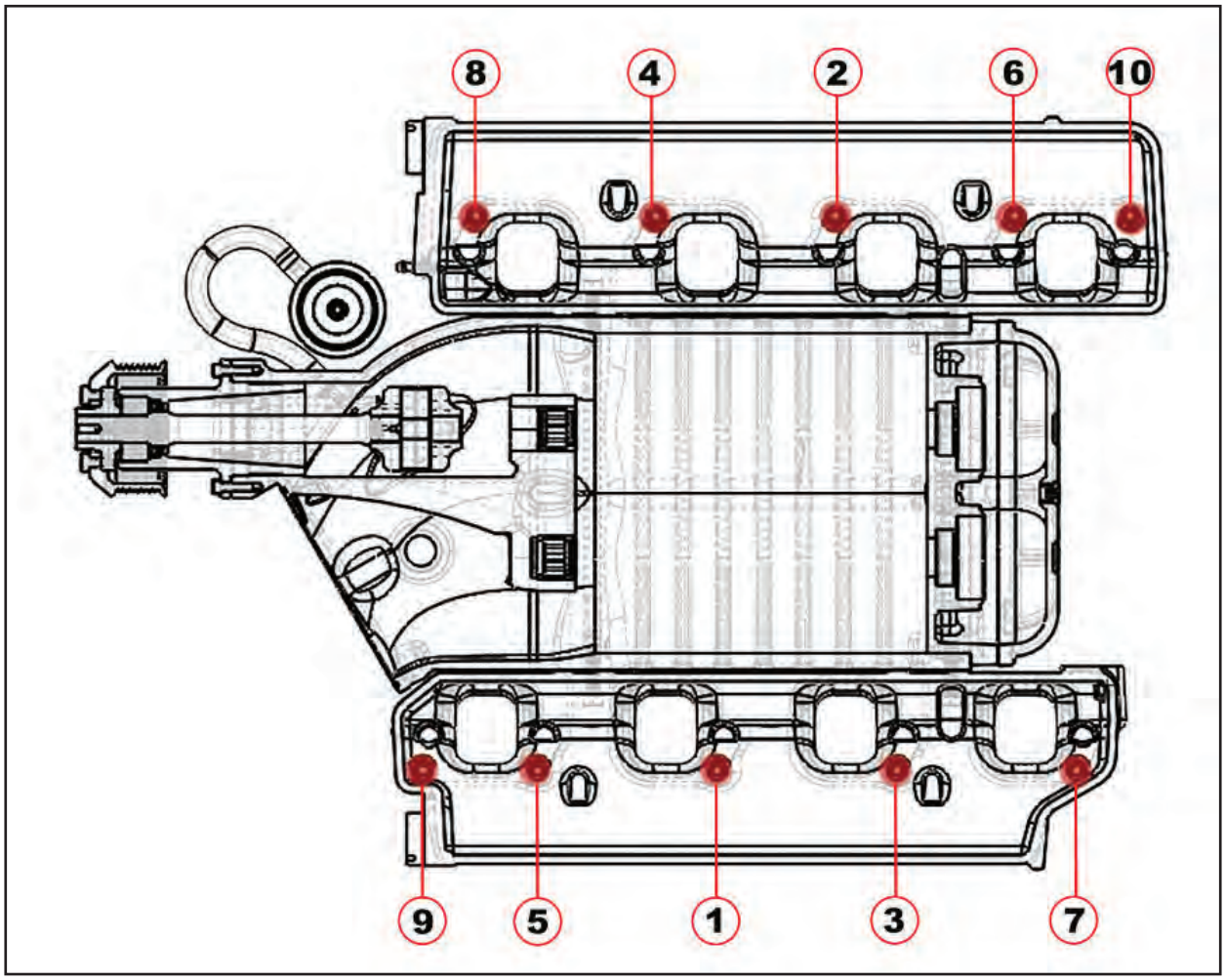
179. After the initial test drive gradually work the vehicle to wide open throttle runs. Listen for any engine detonation (pinging). If engine detonation is detected let up on the throttle immediately. Most detonation is caused by low octane gasoline still in the tank. Premium 91 octane fuel is required. After you finish your installation and road test your vehicle, please fill out the warranty registration. This can be found on our website. If you have questions about your vehicle's performance, please check with your installation facility.

Appendix



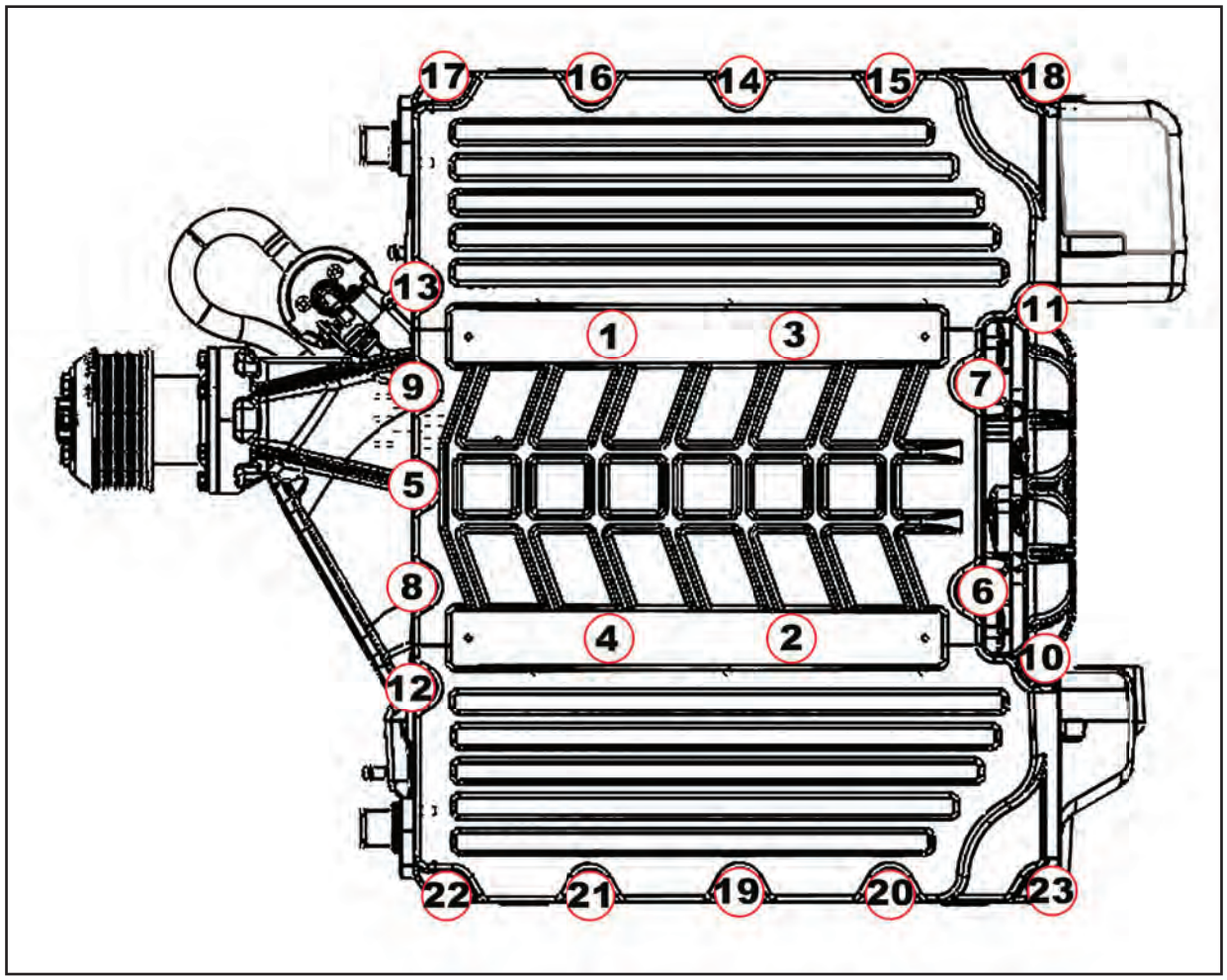
Supercharger Belt Diagram

Torque Specifications



Supercharger to Cylinder Heads: 106 in-lbs

Torque Specifications



Lid to Supercharger Housing: 106 in-lbs

Notes

Notes

Please enjoy your “Magnuson SuperCharged” performance responsibly.

Use only premium gasoline fuel, 91 octane or better.

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SUPERCHARGERS